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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,132	10/10/2003	Yiping Ding	149-0101US	1302

29855 7590 10/18/2005

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EXAMINER
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BHAT, ADITYA S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

21

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/684,132		DING ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Aditya S. Bhat		2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 19-33, 35 and 40-47 is/are rejected.
- 7) ☒ Claim(s) 9-18, 34, 36-38 and 39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 19-33, 35, and 40-47 are rejected under 35 U.S.C. 102(e) as being anticipated by McGee et al. (USPUB 2003/0110007)

With regards to claim 1, McGee et al. (USPUB 2003/0110007) teaches a method for reducing the amount of data of system metrics collected or reported from agent nodes to a system performance monitor for system performance monitoring and analysis, the method comprising the steps of:

sampling a first system metric and obtaining a sampled value of the first metric;  
(Page 2, Paragraph 0017)

reporting the sampled value of the first metric if the sampled value is not between a first parameter and a second parameter; (Page 2, Paragraph 0064 & 0066)

not reporting the sampled value if the sampled value is between the first and second parameters; and McGee et al. (USPUB 2003/0110007) teaches an alert/ report when the system is not within certain parameters/thresholds (Page 2, Paragraph 0066).

Therefore it would be within reasonable interpretation to conclude that no alert/report is generated when the system is running normally.

wherein the first parameter and the second parameter are any real numbers.

(Refer to figure 6)

With regards to claims 2 and 27, McGee et al. (USPUB 2003/0110007) teaches the first parameter and the second parameter are derived from sampled values of the first system metric. (Page 4, Paragraph 0059)

With regards to claims 3 and 28, McGee et al. (USPUB 2003/0110007) teaches the first parameter and the second parameter are derived from at least one statistical parameter of the sampled values of the first system metric. (Page 4, Paragraph 0059)

With regards to claims 4 and 29, McGee et al. (USPUB 2003/0110007) teaches at least one statistical parameter of the sampled values of the first system metric includes the first moment and second moments of the sampled values. (602; Refer to figure 6)

With regards to claims 5 and 30, McGee et al. (USPUB 2003/0110007) teaches at least one statistical parameters of the sampled values of the first system metric further includes the of the sampled values. (Page 6, Paragraph 0096)

With regards to claims 6 and 31, McGee et al. (USPUB 2003/0110007) teaches assuming the sampled value of the first metric that is not reported with an average, wherein the average is an average of previously sampled data of the first system metric. (Page 4, Paragraph 0058)

With regards to claims 7 and 32, McGee et al. (USPUB 2003/0110007) teaches the average is a running average. (Page 5, Paragraph 0075)

With regards to claims 8 and 33, McGee et al. (USPUB 2003/0110007) teaches assuming the sampled value of the first metric that is not reported with an average, wherein the first parameter is zero and the second parameter is a positive number. (Refer to figure 9)

With regards to claims 19 and 40, McGee et al. (USPUB 2003/0110007) teaches sampling a second system metric and obtaining a sampled value of the second system metric; (Page 1, Paragraph 0007)

calculating the correlation coefficient  $cc$  between the sampled value of the first system metric and the second system metric after  $M$  sampling; (Page 2, Paragraph 0017)

stopping sampling and stopping reporting the sampled value of the second system metric if  $|cc|$  is not less than a threshold; (Page 2, Paragraph 0017)  
and

continuing sampling and reporting the sampled value of the second system metric if  $|cc|$  is less than a threshold, wherein  $|cc|$  is the absolute value of correlation coefficient  $cc$ . (Page 2, Paragraph 0017)

With regards to claim 20, McGee et al. (USPUB 2003/0110007) teaches at the system performance monitor, receiving the reported sampled value of the first metric; at the system performance monitor, assuming the sampled value of the first metric as an average for the sampled value not reported. (Refer to figure 1)

With regards to claims 21 and 43, McGee et al. (USPUB 2003/0110007) teaches displaying the received and assumed values of the first metric. (Page 4, Paragraph 0064)

With regards to claim 22, McGee et al. (USPUB 2003/0110007) teaches a method for reducing the amount of data of system metrics collected or reported from agent nodes to a system performance monitor for system performance monitoring and analysis, the method comprising the steps of:

sampling a first and a second system metrics and obtaining sampled values of the first and second system metrics; (110; Refer to figure 2)

calculating the correlation coefficient  $cc$  between the sampled value of the first system metric and the second system metric after  $M$  sampling, wherein  $M$  is an integer; (Page 13, Paragraph 0251-0252)

stopping sampling and stopping reporting the sampled value of the second system metric if  $|cc|$  is not less than a threshold; (Page 2, Paragraph 0064 & 0066) and

continuing sampling and reporting the sampled value of the second system metric if  $|cc|$  is less than a threshold, wherein  $|cc|$  is the absolute value of correlation coefficient  $cc$ . McGee et al. (USPUB 2003/0110007) teaches an alert/ report when a it is not within certain parameters/thresholds (Page 2, Paragraph 0066). Therefore it would be within reasonable interpretation to conclude that the system will continue sampling and reporting when it is within the threshold.

With regards to claims 23,24, 41 and 45, McGee et al. (USPUB 2003/0110007) teaches the threshold is 0.7 or 0.9. (Refer to figure 8)

With regards to claim 25, McGee et al. (USPUB 2003/0110007) teaches after stopping sampling and stopping reporting the sampled value of the second system metric if  $|cc|$  is not less than a threshold, estimating the value of the second system metric using the reported value of the first system metric when the first system metric is reported. (Page 9, Paragraph 0179)

With regards to claim 26, McGee et al. (USPUB 2003/0110007) teaches computer system module for system performance monitoring, reporting and analysis, the module comprising:

- a controller module operative to control the system performance monitoring;  
(110; Refer to figure 2)

- a sampling module coupled to the controller module, operative to sample at least a first system metric and obtaining a sampled value of the first metric; (110; Refer to figure 2)

- a reporting module coupled to the sampling module, operative to report each sampled value of the first metric if the sampled value is not between a first parameter and a second parameter, and not to report the sampled value, if the sampled value is between the first and second parameters; wherein the first parameter and the second parameter are any real numbers. (Page 2, Paragraph 0064 & 0066)

With regards to claim 35, McGee et al. (USPUB 2003/0110007) teaches the controller module is operative to stop sampling after N times, wherein N is an integer. (Page 13, Paragraph 0247)

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With regards to claim 42, McGee et al. (USPUB 2003/0110007) teaches monitoring module operative to receive the reported sampled value of the first metric and to assume the sampled value of the first metric as an average for the sampled value not reported. (110; Refer to figure 2)

With regards to claim 44, McGee et al. (USPUB 2003/0110007) teaches computer system module for system performance monitoring, reporting and analysis, comprising:

a controller module operative to control the system performance monitoring;  
(110; Refer to figure 2)

a sampling module coupled to the controller module, operative to sample at least a first and a second system metrics and obtaining sampled values of the first and second metrics; (110; Refer to figure 2)

a reporting module coupled to the sampling module;



wherein the controller module is operative to calculate the correlation coefficient  $cc$  between the sampled value of the first system metric and the second system metric after  $M$  sampling, wherein  $M$  is an integer; to stop sampling and to stop reporting the sampled value of the second system metric if  $|cc|$  is not less than a threshold; and to continue sampling and reporting the sampled value of the second system metric if  $|cc|$  is less than a threshold, wherein  $|cc|$  is the absolute value of correlation coefficient  $cc$ .  
(Page 2, Paragraph 0064 & 0066)

With regards to claim 46, McGee et al. (USPUB 2003/0110007) teaches a computer network system comprising:

a plurality of network nodes having a CPU; (Page 1, Paragraph 0007)

a memory module coupled to CPU, operative to contain computer executable programs; and (Page 2 Paragraph 0028)

a network interface operative interconnect different nodes of the network,  
(Page 11, Paragraph 0228)

wherein one computer executable program is loaded in the memory module in one node, wherein the computer executable program is operative to perform the method in any one of claims 1 - 25. (Page 2 Paragraph 0028)

With regards to claim 47, McGee et al. (USPUB 2003/0110007) teaches a machine-readable medium comprising a machine executable program, wherein the machine executable program is operative to perform the method in any one of claims 1 - 25. (Page 2, Paragraph 0028)

***Allowable Subject Matter***

2. The following is a statement of reasons for the indication of allowable subject matter: Claims 9-18, 34, 36-38 and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 9, 34, and 36-37:

The primary reason for the allowance of claims 9 & 34 is the inclusion of the method steps of: calculating a weighted running average, wherein  $d_n(w) = d_n w + d_{n-1} (1-w)$ ,  $d_n$  and  $d_{n-1}$  are the weighted running average after  $n$ 'th or  $(n-1)$ 'th sampling,  $w$  is the weighing factor for the sampling  $S_n = S_{n-1} + (n-1)(d_n - d_{n-1})^2 / n \sigma_n^2 = S_n / n$ , wherein  $S_n$ ,  $S_{n-1}$  are the sum of the differences squared,  $\sigma_n$  is the standard deviation, calculating the first parameter to be  $(d_n + a\sigma_n)$  and calculating the second parameter to be  $(d_n + b\sigma_n)$  wherein  $a$  and  $b$  are two constant real numbers. It is this feature found in the claim(s), as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claim(s) allowable over the prior art.

The primary reason for the allowance of claim 36 is the inclusion of the method steps of: wherein  $N$  is determined by a confidence interval  $cl$ , a tolerable variance error  $e_v$ , wherein  $12 e_v = 100f(cl)^2 / N$ , wherein  $f(cl)$  is the  $(1+cl/100)/2$ -quantile of the unit normal distribution. It is this feature found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 37 is the inclusion of the method steps of: the controller module is operative to report the weighted running average  $d_{iN}$  where  $iN$  is a multiple of  $N$ ,  $i$  is an integer; and to report  $d_n$  when the  $|d_n - d_{iN}|$  is greater than  $dd$ , wherein  $dd$  is a real number. It is this feature found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 10-18 are allowed due to their dependency on claim 9.

Claim 39 is allowed due to their dependency on claim 34.

Claim 38 is allowed due to their dependency on claim 37.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

3. Applicant's arguments filed 7/28/2005 have been fully considered but they are not persuasive.

With regards to the claims 46-47, specifically multiple dependency objections, the objections were erroneous and have been withdrawn.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued,

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will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In this instance applicant argues that the prior art of record does not teach reporting the sampled value of the first metric if the sampled value is not between a first parameter and a second parameter. (Page 4, paragraph 0059-0066). The cited portion of the McGee reference teaches threshold testing, detection of an abnormal condition and notifying/reporting when an abnormal condition has occurred. Paragraph 0066 goes on to describe thresholds with natural upper or lower bounds. With regards to applicant's argument which states that McGee does not teach stopping sampling and stopping reporting... Applicant's attention is directed towards paragraph 0063 that states suppressing the event.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Frogner et al. (USPN 6,735,553) teaches use of model calibration to achieve high accuracy in analysis of computer networks, and Ding et al.

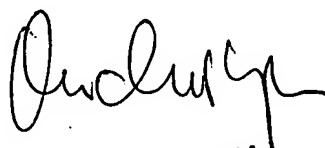
(USPN 6,564,174) teaches a system performance monitoring method e.g. for computer system, involves performing analytic tests on data points representing computer system resource measurements, to detect possibility of power-tail behavior

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S. Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat  
October 13, 2005

  
MICHAEL NGHIEM  
PRIMARY EXAMINER